

THE
WHOLE ART
OF
LEGERDEMAIN,

OR THE

BLACK ART

LAI D OPEN AND EXPLAINED,

BY

KATTERFELTO, COMAS, JONAS,

AND THE

MOST CELEBRATED PROFESSORS

IN

NATURAL MAGIC,

&c. &c. &c.

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MAGICAL MIRROR ;

OR,

Philosopher in Good Humour:



How to terrify such as are entirely unacquainted with the Nature of Phosphorus.

PHOSPHORUS is a chemical preparation from animal substance, and is, in fact, a perpetual fire ; its uses are many, and have been explained by most of the greatest philosophers ; it must be continually kept in water, or it will consume itself ; it is a very dear commodity, and therefore few can afford to play tricks with it, yet they are to be done in a very terrifying manner. If you would frighten a person who is ignorant of the means you make use of, take phosphorus and write upon a wall, or some place you know the party will pass in the dark ; the words may be just what you please, so that they be applicable to the person you intend to fright ; you may likewise draw strange pictures of dragons or devils, with words coming out of their mouths, with phosphorus, which in the dark will appear all on fire, have a most frightful appearance, and strike wonder in the beholders. This kind of diversion should, however, be cautiously practised, as weak minds may be terrified into fits, or perhaps be deprived of their senses for ever, and thinking it to be the work of some diabolical agent. There is one instance preserved, in which the experiment proved of real benefit. A very prophane wretch, seeing something of the kind, reflecting on his wickedness, and not knowing how it was done, became very good, left off his former vicious course of life, and performed the duties of a worthy member of society. So far the trick was to be applauded, but the success of it could not be known until it was tried. Phosphorus, though dan-

gerous in unskilful hands, may be converted to various useful purposes; it may serve in the night to procure, on any emergency, a light, much sooner than with flint and steel, as it will set fire to a match immediately. These and many other uses, are what render it valuable, notwithstanding, as a curiosity, it has hardly its equal.

The Artificial Bird, singing at the Desire of the Company.

This bird perched on a bottle, sings without any preliminary exercise, all the airs required, not excepting those which the most cunning musician can compose extempore. He also sings equally correct, changed to different bottles and different tables; and the breath from his bill blows out a candle and lights it speedily after. To conclude, the bird performs whilst in your hand, without deriving any aid from the bottle.

EXPLANATION.

Behind the curtain which covers part of the partition, are placed two small speaking trumpets, which the confederate employs to convey his voice to different parts, according to the position of the table and the bottle, on which the bird is perched. The confederate has in his mouth the inner skin of an onion, by which he imitates the notes of a bird in the same manner as the celebrated Rossignol follows the air given to the musicians, either by memory, or the notes furnished them. If the air is too difficult for the confederate and the musicians to execute extempore, you acquaint the company that (to render the trick more astonishing) you will begin by some well known air, and then suddenly fall into the air given to be executed, as if to surprise the bird, and add to the difficulty of executing what is laid before it; some of the musicians avail themselves of this moment to throw a rapid eye over the difficulty proposed, and take care not to begin until they are sufficiently studied in it; the bird has in its body a little double bellows, and between its legs a little moving peg, which puts the bellows in motion—by the levers which are under the cloth, when the confederate draws the wire which is hidden in the feet of the table—by the same means the bellows is moved to blow out the candle; and it proves to the spectators, that the notes are really formed in the throat of the bird, because the air comes through its bill. When you take the bird in your hand, you put the bellows in motion with your thumb, and the wind in the same manner extinguishing the candle, persuades the company that

the bird sings without the aid of any machinery hidden in the table; the candle being only a moment extinguished, and the wick still warm, is lighted instantly by touching the bill of the bird, which for that purpose, has been furnished with a little phosphorus that operates as a match.

How to make two Bells come into one Hand, having put into each Hand one.

This feat must be performed with three bells; you must put one bell into your left sleeve, then put one bell into one hand and another bell in the other hand (they must be little morris bells) withdraw your hands and privily convey the bell from your left hand into your right; then stretch both your hands abroad, and bid two folks hold your hands fast, but first shake your hands, and say, "Do you hear them?"

The bell that is in your sleeve will not be known by the rattling but that it is in your hand; then say, "He now that is the arrantest whore-master or cuckold of you both shall have both the bells, and the other none at all:" open your hands then and show them, and it will be thought you deal by art in magic.

How to cut a Man's Head off, and to put the Head into a platter a yard from his Body.

This is a noble action if it be handled by a skilful hand. To shew this feat of execution you must cause a board, a cloth, and a platter to be purposely made, and in each of them to be made holes fit for a body's neck: the board must be made of two planks, the longer and broader the better; there must be left within half a yard of the end of each plank, half a hole, so as both the planks being thrust together, there may remain two holes, like the holes in a pair of stocks; there must be made likewise a hole in the cloth, a platter also must be set directly over or upon one of them, having a hole in the middle thereof, of the like quantity, and also a piece cut off the same as big as his neck, through which his head may be conveyed into the middle of the platter, and then sitting or kneeling under the board, let the head only remain upon the board, in the frame, then to make the sight more dreadful, put a little brimstone into a chafing-dish of coals, setting it before the head of the boy, who must gasp two or three times so as the smoke may enter his nostrils and mouth, which is not unwholesome, and the head presently will appear stark dead, if the boy set his countenance accordingly; and if a little blood be

sprinkled on his face the sight will be stranger. This is commonly with a boy instructed for that purpose, who being familiar and conversant with company, may be known as well by his face as by his apparel. In the other end of the table, where the like hole is made, another boy of the bigness of the known boy must be placed, having on his usual apparel: he must lean or lie upon the board, and must put his head under the board, through the side hole, so as the body shall seem to lie on the end of the board, and his head lie in a platter on the other end. There are other things which might be performed in this action, the more to astonish the beholders, which because they require long descriptions, I omit; as to put about his neck a little dough kneaded with bullock's blood, which being cold, will appear like dead flesh, and being pricked with a sharp round hollow quill will bleed and seem very strange; and many rules are to be observed herein, as to have the table cloth so long and so wide as it may almost reach the ground.—Note, suffer not the company to stay too long in the place.

A Pleasing trick by Figures.

The person who performs the trick must write down four figures, which being seen by the company, he is privately to mark down the sum that those figures, with another four under them, marked by one of the company, and a third row by himself, shall amount to. The performer marks 1, 2, 3, 4, and then privately the sum the three rows will make, which let the person in company mark what figures he will in the second row, the third marked by the performer shall make the sum total 11233. As for instance:

The performer marks	—	—	1234
The person in company	—		5678
The performer	—	—	4321

11233

This trick is done by the performer adding the figure 1 at the beginning of the first number, and making the last figure one less. Whatever figures are marked in the second row, the performer is to mark such under them as will make the figures in the two last rows tell for nine, when the sum total will amount to the sum privately marked by the performer.

The Process of applying Gold to Paper or Parchment, translated from the German.

Take a certain quantity of gum arabic, the whitest is the best; and, having reduced it to an impalpable powder in a

brass mortar, dissolve it in strong brandy, and add to it a little common water to render it more liquid. Provide some gold in a shell, which must be detached, in order to reduce it to a powder. When this is done, moisten it with the gummy solution, and stir the whole with your finger, or with a small hair-brush; then leave it at rest for a night, that the gold may be better dissolved. If the composition becomes dry during the night, it must be diluted with more gum water, in which a little saffron has been infused; but care must be taken that the gold solution be sufficiently liquid to be employed with the pen. When the writing is dry polish it with a dog's tooth.

Another Process.

Reduce gum ammoniac to powder, and dissolve it in water in which gum arabic has been previously dissolved, and to which a little garlick juice has been added. This water will not dissolve the gum so as to form a transparent fluid; for the result will be a milky liquor. With this liquor you must form your letters, or ornaments, on paper or vellum, by means of a pen or hair brush; then suffer them to dry, and afterwards breath on them some time, till they become somewhat moist, and immediately apply a few bits of gold leaf cut to the size of the letter; press the gold leaf gently with a ball of cotton, or bit of soft leather, and when the whole is dry, take a soft brush and draw it gently over the letters, to remove the superfluous gilding. The parts which you wish to polish, and render brilliant, may be burnished with a dog's tooth.

The changeable Rose.

Take a common full blown red rose, and having thrown a little sulphur finely pounded into a chafing dish with coals, expose the rose to the vapour. By this process the rose will become whitish; but if it be afterwards immersed some time in water, it will resume its former colour.

Another trick by Figures

Tell any person to think of what number they please, which being done, tell them to double that number: then to half the whole; then to take away the first number they thought of, and you will tell them the remainder. To explain this trick, suppose the person thinks of 12, you tell them to double it, which makes 24; you then tell him to add 10 to it which makes 34; then half the whole, which reduces it to

17; then take away the first number he thought of, which is 12, and the remainder will be 5. The doing of this trick is directed by a most infallible rule: for whatever even sum you tell them to add, the remainder (as in the case above) will always be half that number.

The Dancing Egg.

Three eggs are brought out, two of them are put on a table, and the third in a hat; a little cane is borrowed from one of the company, and it is shewn about to convince the spectators that there is no preparation. It is then placed across the hat, the hat falls to the ground, and the egg sticks to it as if glued, the orchestra then plays a piece of music, and the egg, as if it was sensible of the harmony, twists about the cane from one end to the other, and continues its motion till the music stops.

EXPLANATION.

The egg is fastened to a thread by a pin, which is put in lengthways, and the hole, which has been made to introduce the pin, is stopped with white wax. The other end of the thread is fastened to the breast of the person who performs the trick, with a pin bent like a hook—the cane passing under the thread near to the egg serves for it to rest on—when the music begins, the performer pushes the cane from left to right, or from right to left; it then appears as if the egg ran along the cane, which it does not, being fastened to its thread, its centre of gravity remains always at the same distance from the hook that holds it; it is the cane which sliding along presents its different points to the surface of the egg.—N. B. To produce the illusion, and persuade the company that it is the egg which carries itself toward the different points of the cane, the performer turns a little on his heel, by this means the egg receives a motion which deceives the spectators, it remaining always at the same distance from the point to which it is fastened.

How to make Water freeze by the Fire-side.

This feat can be done or performed only in winter, and at such times as snow may be had, and he that will shew it, must have in readiness a handful of salt: the time serving and the party being provided, let him call for a joint stool, a quart pot, a handful of snow, a little water and a short staff; first let him pour a little water upon the stool, and upon it let him set the quart pot, and put the snow into the

pot, the salt also, but privately ; then let him hold the pot fast with his left hand, and therewith churn the snow and salt in the pot, as if one should churn butter, and in half a quarter of an hour the pot will freeze so hard to the stool, that you can scarcely with both hands pull it off from the stool.

To blow a Sixpence out of another Man's Hand.

Take a sixpence, blow on it, and clap it presently into one of your spectator's hands, bidding him to hold it fast: then ask of him if he be sure he have it, then to be certain he will open his hand and look. Then say to him, "Nay, but if you let my breath go off I cannot do it. Then take it out of his hand again, and blow on it, and, staring him in the face, clap a piece of horn in his hand, and retain the sixpence, shutting his hand yourself. Bid him hold his hand down, and slip the teaster between one of his cuffs. Then take the stone that you shew feats with, and hold it unto his hand, saying, "By virtue hereof I will command the money to vanish you hold in your hand; vade, now see." When they have looked, then they will think that it is changed by virtue of your stone. Then take the horn again and seem to cast it from you, retaining it, and say, "Vade," and anon say, you have your money again. He then will begin to marvel, and say, I have not; say then to him again, you have, and I am sure you have it; Is it not in your hand? If it be not there, turn down one of your sleeves, for it is in one I am sure: where he finding it, will not a little wonder.

A sure way to catch a Pickpocket.

A gentleman being in a throng in a fair, had his purse picked out of his pocket, he missing it, presently buyeth two pennyworth of fish-hooks and causeth a taylor to sew them round about the upper part of his pockets, with the point of them downwards, and so the next day away he goes to the fair again among the throng, seeming careless of his pockets; presently there was a diver nibbling at the bait, and nimbly had his hand in his pocket; the gentleman being wary (perceived that the fish had swallowed the hook, gave a jerk aside, which caused the hooks to catch good hold in his hand, and then he had him sure; then said the gentlemen, "Fellow, what maketh thy hand in my pocket O, good Sir! (replied the pickpocket) pardon me I cannot,

pull it out. The gentleman told him of the loss he had sustained the day before, and making him restore back his money he cut out his pocket and let him go, with store of pricking work to get the hooks out of his hand again.

Of Three Sisters.

A certain man having three daughters, to the eldest he gave 22 apples; to the second he gave 16 apples; and to the third he gave 10 apples, and sent them to the market to sell them, and gave them command to sell one as many for a penny as the other (namely 7 a penny) and every one to bring him home as much money as the other, and neither to change either apples nor money one with another: How could that be? This (to some) may seem impossible, but to arithmeticians very easy; for wherea the eldest had three pennyworths and one apple over; the second two pennyworths and two apples over; and the youngest had one pennyworth and three apples over; so that the youngest had so many single apples and one pennyworth as the eldest had pennyworths and one apple over, and consequently the second proportional to them both. They made their market thus: a steward coming to buy fruit for his lady, bought all the apples they had at 7 a penny, leaving the odd ones behind; then had the eldest sister three-pence and one apple; the middle sister two-pence and two apples; and the youngest one penny and three apples. The steward bringing the fruit to his lady, she liked it so well, that she sent him for the rest, who replied, that there were but few remaining; she notwithstanding sent him for them, and bid him bring them at any rate. The steward coming to the market again could not buy the odd apples under a penny a piece (who to content his lady was fain to give it) then a had the youngest sister three pennyworth; the middle sister twopennyworth; and the eldest one pennyworth; and so had they all four-pence a piece, and yet sold as many for a penny one with another, and neither changed apples nor money one with another, as they were commanded.

To make a Person tumble and toss all Night, and not be able to sleep.

If a fellow servant is ill-natured, and given to tell tales, and create mischief, make use of the following trick; get some roach allum, and pound it very small, and sprinkle it in his

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or her bed; or else a little cow-itch, or horse-hair cut very fine, either will answer the same purpose, and it will cause the person to be so restless, that they will not be able to get the least sleep.

To make a glorious Light with a Candle.

Go to the glass-house and get them to blow you a thin round globe glass, bigger than a penny loaf, (the bigger the better) with a short neck like a bottle. When you have this glass, with glue or wax, bind a piece of tape about the neck or top, making a little loop therewith to hang it by; then fill your glass with the purest conduit or spring water you can get (put some aqua vitæ or brandy therein to keep it from freezing) stopping it close to keep the dust out; having thus done, if you will use it at a table or bench, knock a tenterhook or nail into the ceiling or shelf, and with a tape or packthread asten it to the loop and hang it up; but a round stick will be better to hang it on, putting it into a post or hole in the wall, that you may make it higher or lower at your pleasure in turning the stick; then behind your glass set a lighted candle upon a table, and you will have a glorious light through the glass and water for your purpose.—Some choose to place a sheet of oily paper between them and the candle, and this will cause a good light.

The Golden Head, which leaping and dancing in a Glass, answers different questions.

To shew that this head is not connected with any other object, you put some crown pieces at the bottom of a glass, and a covering over all; this however does not prevent the head, which you affirm to be of solid gold, from dancing in the glass to answer by numbers, and yes or no, to questions proposed to it; at the same time, a bunch of rings, to another glass, at a little distance, as if by sympathy, performs the same motions. In the room of the first head, which is shewn round to the company, you take second from off the table, where the experiment is to be performed. This second head is attached to a silken thread which passes through the partition into the hands of the confederate; this thread, instead of leaning on the brim of the glass, where the cover would prevent it from sliding, passes through a small well-polished nick to give it easy play and prevent it from breaking.—N. B. The crown pieces, which you put in the bottom of the glass, under pretext

of preventing any communication between the golden head and the machinery, which may be suspected to be hid in the table, are not useless for they serve as ballast, and prevent the glass from yielding to the motion occasioned by drawing the thread.

To write any Name upon a Paper, and then burn it to ashes, yet afterwards it may be read plainly.

Take a new clean pen that was never writ with, and dip in your own water as you do ink, then strip up your shirt sleeve above your wrist, and upon your arm write your name, or any mark, and then let it dry on your skin, and nothing will be seen, then put down your sleeve and button your wrist; do this privately and it will cause some wonder; then take a piece of white paper and write your name, or the mark thereon with another pen of black ink (but let it be written as like the other as you can) then take the paper and burn it, and lay the ashes on a table, and stripping up your sleeve, rub the ashes hard with your finger, where you had written with your water, then blow off the ashes, and the name or mark will plainly be read on your arm in black letters.

A curious trick to change Writing.

Salt of sorrel, the oxalic acidule of that plant is good to take out ink spots from white stuffs, wood, ivory, &c. which it does by virtue of its attraction for iron; but Fourcroy and Barthelet say, that the pure oxalic acid might be advantageously substituted instead thereof, on account of its greater solubility. Muriatic acid is the handiest, as it is easily got, and will wonderfully cause writing to disappear without injuring the paper or turning it yellow.

How to break a staff upon two Glasses of Water.

Place the glasses (being full of water) upon two joint stools, or such like, equidistant from the ground, and distant one from another the length of the staff; then place the end of the staff upon the edges of the two glasses, so that they be sharp; this done, with all the force you can, with another staff, strike the staff, which lies on the glasses in the midst, and it will break, without breaking the glasses, or spilling the water.

A Method of drawing a deformed Figure, which will appear well proportioned from a certain Point of View.

Draw any thing you may fancy on a thin white pasteboard : then prick it ; afterwards put the same on an horizontal surface which we will suppose to be another pasteboard. Put a lighted candle behind that drawing, and draw on the horizontal surface the lines given by the light ; this will give a deformed design. This being done, take away the drawing that was pricked and the candle ; then place your eye where the light was, and you will see your drawing assume a regular form.

Of the Accusation of a Thief

A thief breaking into an orchard, stole from thence a certain number of pears, and at his coming forth he met with three men one after another, who threatened to accuse him of theft, and for to appease them, he gave unto the first man half the pears he had stolen, who gave him back 12 of them, then he gave unto the second, half of them he had remaining, who returned him back 7 ; and unto the third he gave half the residue, who returned him back 4, and in the end he had still remaining 20 pears. Now I do demand how many pears he had stole in all ? To answer this question, you must work backward, for if you take 4 from 20, there will remain 16, which being doubled, make 32 ; from which abate 7, and there will remain 25 ; which subtract 12, and there will remain 38 ; which again doubled make 76 the true number of pears that he gathered.

A whimsical trick to make sport in company

Take salt-petre an ounce, cream of tartar an ounce, sulphur half an ounce, beat them to powder singly, then mix them together, and put the powder in a paper in your pocket you may then at any time you please, convey a grain into a pipe of tobacco, and when it takes fire it will give the report of a musquet, but not break the pipe ; or you may put as much as will lay upon your nail in any place, upon little bits of paper, and setting fire to it, there will be the report of so many great guns, but it will not produce any bad effect.

An artificial Spider which moves by Electricity

Take a bit of burnt cork, as big as a pea : give it the shape of a spider ; make its legs with threads of hemp ; pu a

grain of lead in the cork to give it some weight; then hang this artificial spider by a bit of grey sewing silk (that is not twisted) between two bodies, the one electrified, and the other not; or between two bodies endowed with different electricities: it will go and come between these two bodies, and the movement of the legs will be seen as plain as if it were a living spider.

To make a Person tired, or sweat, at carrying a small stick out of a Room. A good subject for a Wager.

Most amusements become more agreeable, as they appear more insignificant at the first, and become more laughable in the end. Give a stick into the hands of any person, suppose not thicker than a pea in circumference, or three inches in length, and tell him you will lay any wager that he shall not carry it out of the room a foot from the door without sweating, being tired, or complaining that his back aches; this the person, not knowing your intention no doubt will laugh at and readily accept the bet: as soon as you have made the stake sure, take a knife and cut off a little bit, so small you can hardly see it, and bid him carry that at first, and then give him another; and if he thinks proper to abide by the wager, you may by this means make him go some thousands of times; but sooner than proceed to the end of the experiment, it is a thousand to one but he owns he has lost; for it might be so managed, by the smallness of the pieces cut, the little stick might find him employment for a fortnight.

To make a colour that will appear or disappear by means of the Air.

Take a smelling bottle; put it in some alkali volatile, in which you have dissolved some copper filings: this will produce a blue colour. Present the smelling bottle to one of the company, desiring him to stop it; and, to their great astonishment, the colour will disappear as soon as the smelling-bottle is stopped: you will make it easily re-appear by taking off the cork, which will be not less surprising.

To make a calf's head bellow as if alive, when dressed and served up.

This is effected by a simple and innocent stratagem; it consists in what follows; take a frog that is alive, and put it at the farther end of the calf's head, under the tongue which you will let fall over it; taking care not to put the frog there till the calf's head is going to be served up. The heat of the tongue will make the frog croak; which sound coming from the hollow part of the head, will imitate the the bellowing of a calf as if it were alive.

How to make sport with a Cat.

Get a little bell, such as the tame hawks have at their legs, and tie the bell something hard at the end of the cat's tail, and let her go; she feeling her tail smart, and hearing the bell jingle, will run up and down as if she were mad, flying against the walls and windows; then, if she can, she will get into some hole to hide herself, but when she wags her tail ever so little, then out she comes, and is as mad as before, and never will rest till it be off. Walnut-shell, fastened with a little warm wax or pitch, to the cat's feet will make sport all over the house, and at night on the stairs, will sound like a ghost going up and down.

A conceit to procure Laughter.

Take a ball in one hand, and another in the other, and stretch your hands as far as you can one from the other, and if any one will lay a wager that you will not withdraw your hands, and yet will make both of them come into either hand, which they please. It is no more to do than to lay one down upon a table, and turn yourself round, and up with your other hand, and your wager is won, and it will move no small laughter to see a fool so lose his money.

To render hideous the Faces of all the Company.

Dissolve some salt and saffron in some spirits of wine dip a little tow in it and set fire to it. At this light, those who are of a fair complexion will appear green, and the red of the lips and cheeks turn to a deep olive colour.

Curious way to kill Rats

In 1783, a premium of five guineas was given by the Dublin Society for the following receipt to kill rats. Take 1 quart of oatmeal, 4 drops of oil of Rhodium 1 grain of musk, 2nuts of nux vomica powdered. Mix the whole together, and place it where the rats frequent; continue to do so while they eat it, and it will soon destroy them, be they ever so numerous.

To catch Kites, Crows, Magpies, &c. alive

Get *nux vomica*, beat to powder; this done, take raw flesh or liver, and cut it into little pieces, that the fowl may swallow them whole: then cut holes in the same, and put your powder therein, and then lay these pieces where they haunt, but as soon as they have swallowed down the same, they will fly to the next tree they can come at, and this presently makes them so drunk or sick, that they will fall down to the ground; but be sure to watch them, and run presently to the tree, for they will soon recover and fly away. I believe if it were sodden with other grain, it would have the like operation with other fowl.

The Divining Rod. A curious Philosophical secret from Albert the Little.

A Frenchman, named James Aimer, performed wonders this way the beginning of the last century. He discovered water and hidden treasures in several places to the astonishment of the beholders; a modern author has given the following directions for performing what will surprise, and be thought impossible. A dozen boxes are produced to the company, and some one person is desired to put secretly a crown piece into one: these boxes are then in succession placed on the table, without opening or touching them: a rod is held over each of them, which is supported on the two fore fingers: when it is held over the box that contains the crown-piece, it turns round with rapidity, which occasions many persons to believe that the metallic emanations cause it so to turn. Each box must have on the inside a double moveable bottom, at a small distance from the first, by the action of a weak spring. This double bottom presses on the spring; and when it feels the weight of the crown-piece, it

sinks in about half a line ; by this small movement, a very minute pin, which was before imperceptible, appears on the outside of the box, and announces that the crown-piece is in that box. We shall now proceed to teach how to turn the rod, either for the purpose of performing the trick we have described, or in the pretended discovery of subterraneous waters. We shall point out the means of doing, or causing an automation to perform the experiments of those who pretend to the exclusive power of discovering the sources of water. First, you must have a rod of ozier, hazel, or any other wood ; provided it be of equal thickness, flexible, well rounded and polished. Secondly, it must be two feet in length, and bent by giving it the shape of a circle of two feet radius. Thirdly, to give it weight, and of course fitter for the motion of turning round, you must apply to it three metal rings, one in the middle, and one at each end. Fourthly let it rest on your middle finger placed horizontally, in such a manner, that the two points on which it rests shall be near the extremities of the rod : you will then perceive that the middle will be underneath the level of the two ends ; but, by gently approaching your two fingers to each other, you will find the middle of the rod to elevate by degrees, and the extremities to fall ; then, if you replace your hands in their former situation, and at the same distance as before, the rod will regain its former position. Fifthly, it is by this drawing your hand to and fro that you acquire the facility of turning the rod with address ; being ever particularly careful to give the smallest apparent motion to your hands. Sixthly, having acquired the habit of turning the rod by the vibration of your hands, if any one perceives your motion when you perform the trick, and attempts to reproach you with so doing, answer them as the springtellers do, that the metallic emanation, or the vapours of the subterranean waters, occasioned the stick to turn, and give you an ague at the same time. Seventhly, when you are desired to discover water in the country, turn your rod boldly wherever you perceive the grass to be green and fresh in times of drought, because it is really there that the vapours of the subterraneous waters supply the grass with moisture that occasions its freshness. Eighthly, if this fail, you always choose in preference the lowest spot of a valley, and there turn your rod, being well assured that there is water there ; because that must be the deposit of the rain, which the neighbouring heights have absorbed. Nevertheless, if you should happen to be deceived, say that at that moment a current of humid air, or electrical matter, produced on you the same effect as

the vapours. Ninthly, it is more difficult to cause an automaton to turn the rod than appears at first sight. The spontaneous motions of an alert man can remedy, every moment the changes which may chance to occur in the position of the rod; which, by inclining too much from the right to the left, or from the left to the right, would soon fall if it were not speedily restored to its proper poise. But the movements of an automaton being necessarily uniform, or various, without foresight to consequences, cannot furnish remedies necessary for fortuitous situations. We shall now smooth this difficulty, to direct those who wish to have the rod turned by a figure, the hands of which receive a small movement of vibration by clock-work—Tenthly, make a curbed rod, similar to the one we have described; but, instead of being cylindrical, it must be a parallelipede rectangle; and at the two places on which it rests, it must be rounded, and of the smallest diameter. Thus, when it rests on the brass wires held by the figure, it can neither err to the right or left, and the uniform movements of the automaton continue to turn the rod. Eleventhly, the rod being thus constructed, if you approach towards the middle the two weights that are at the extremities without being perceived, the centre of gravity will be changed, and no one will be able to turn it, when it is supported from the points that are rounded. Nor will it be possible to make it turn on other points; because, being squared every where else, the friction would be too great, and the vibrations of the hands too visible. Twelfthly, to occasion the rod to turn in the hands of a figure, when it is carried to different branches of an aqueduct, or when it is presented with water or money, you must have a loadstone concealed in your pockets which can operate on a small iron trigger, and by that means put the clock-work in motion, which is to produce the vibration in the hands of the automaton.

To cut a Glass, a famous Invention.

You must have a piece of well dried match cord, light it that it may have a good coat, then take a beer glass, and hold the match to the edge of the glass; have your finger ready wet, and when the glass is very hot, clap your finger to the hot place, and it will suddenly crack about a quarter of an inch downward, then keep the coal of the match the like distance from the end of the crack, and as it follows, so move your hand and cut it screw fashion, otherwise it will not hold together till you have it through the bottom, or like

waves; when you have done it, and that is cold, as it will be, take it by the foot, and turn it downwards, it will stretch so that you may put your finger between each cutting, then turn it up again, you may drink a glass of beer in it, and not spill a drop.

How to turn a Box of Bird-seed into a living Bird.

You must have a box made on purpose with a false lid. This box must be turned neatly like unto egg boxes, so that they cannot find out where it opens, and you must have a false lid to clap on and off, and on that lid glue some bird-seed; so before you shew the box to the company put a bird into the box, and then the false lid, then shew the box to the company, and it will seem to be full of seed, to the contrary of which nobody can tell, then put your true lid on saying, Gentlemen, I will command all the seed out of my box, and command a living bird to appear, so taking off the covers, the bird will appear.

*How to kill any Fowl, but especially a Pullet, and with
Words to give it Life again.*

Take a hen, or a chicken, and thrust a nail, or a sharp pointed knife, through the middle of the head thereof, the edge towards the bill, so as it may seem impossible for her to escape death; then use some words, and pulling out the knife, lay oats before her, and she will eat, and live, being nothing at all grieved or hurt with the wound, because the brain lieth so far behind in the head, as it is not touched, though you thrust your knife between the comb and it; and after you have done this you may convert your speech and actions to the greivous wounding and present recovery of yourself.

The oracular Letters.

Write on several slips of paper different questions, and such as may be answered by the name of some person for example, who is the merriest man in the company? Answer, Mr. ****. To whom will Miss **** be married? Answer, To Mr. ****. These questions are to be wrote in sympathetic ink, and exposed to the fire, and the answers wrote in the same ink, and left invisible. The papers are to be folded in the form of letters, and in such a manner that the part where the name is wrote shall be directly under the

seal, and the heat of the wax will make it visible. Then give the letter to the person who requires the answer and he will find it plainly wrote. A recreation similar to this may be made with a number of blank cards, on each of which an ace of spades is drawn with the invisible ink; then let a person choose any one of them, and enclose it in a letter-case, prepared in such a manner that the figure of the ace shall be directly under the seal, and on opening the letter it will be immediately visible.

Imitative Illuminations.

On a very strong double paper, whose backside is blacked with soot dissolved with brandy, and to which a little gum arabic is added, you must first paint the draught of the illumination you intend to represent in miniature, and make the exact place of the several lamps and other parts that compose it. Then take piercers of different sizes, with which make holes in the papers, in such form as shall represent the flame of a lamp or other body. If the lamps are supposed to be all in a line, you must use the finest piercers for the smallest lamps, and the larger for the greatest; but, if the parts of the illumination be supposed at different distances, then the fine piercers are to be used for those parts that are most distant, and the holes must be nearer together, in proportion to the distance. If there be objects in front perpendicular to the point of view, you must use piercers whose diameters decrease insensibly and, make the holes continually closer, in proportion as the extremities of the front are more distant. It is not material in this case whether the points be close together, provided the perspective be observed. When the piece is completely cut out, you place behind this double paper, one that is very thin; observing to colour the parts that are to appear the most distant with a little carmine diluted in water. (This circumstance is necessary, for the more distant natural illuminations are, the more red they appear.) It is then to be placed in a box, and strongly illuminated behind by several candles or lamps placed at equal distances from each other, that all the parts may be equally illuminated: (the candles should be placed not close to the paper, but at five or six inches distance; and, if they do not produce a light sufficiently strong, you may place more. It will be proper to line the box with tin, as that will reflect the light in the piece :) for, otherwise, the illusion will not be complete. The front of the paper should be also illuminated

with a faint light, such as is just sufficient to show the pieces of architecture that may be pointed on it. After the manner above described, prints also of every kind may be cut out, and placed in any optical machine, except such as have an inclined mirror; for, there the print being naturally placed in a horizontal direction, it will be difficult to illuminate it sufficiently to produce any remarkable effect. If you are desirous, however, of making an experiment with a print in a horizontal position, instead of placing a transparent paper behind it, you must put one that is gilt, which is to appear through the parts cut out. A print thus prepared, when a strong light is thrown upon it, will represent an illumination remarkably well.

The Book of Fate.

Make a book seventy or eighty leaves, and in the cover at the end of it there be a case, which opens next the binding that it may not be perceived. At the top of each right-hand page, write any question you please, and at the beginning of the book let there be a table of all those questions, with the number of the page where each is contained. Then write with common ink on separate papers, each about half the size of the pages in the book, the same questions that are in the book; and under each of them write, with the ink made of the impregnation of Saturn, or the dissolution of bismuth, the answer. Soak a double paper in the vivifying ink, made of quick lime and orpiment, or the phlogiston of the liver of sulphur, and place it, just before you make the experiment, in the case that is in the cover of the book. Then deliver some of the papers, on which the questions are written, to the company; and, after they have chosen such as they would have answered, they put them in those leaves where the same questions are contained; and, shutting the book for a few minutes, the sulphureous spirit, with which the paper in the cover of the book is imbibed, will penetrate the leaves, and make the answers visible, which will be of a brown colour, and more or less deep in proportion to the time the book has been closed. If a weight be placed upon the book, the effect will be sooner produced. Or you may put the book in a box that will press it close down.

Of Magical Lights, Lamps, Candles, &c.

There are made, artificially, various kinds of lamps, torches, candles, and the like, of some certain and appropriate materials and liquors opportunely gathered and col-

lected for this purpose, which when they are lighted, and shine alone, produce some wonderful effects. There is a poison from mares, after copulation, which composed into torches, with their fat and marrow, when lighted, doth represent on the wall a monstrous deformity of horse's heads; which thing is both easy and pleasant to do; the like may be done of asses and flies. The skin of a serpent, or snake, lighted in a green lamp, makes the images of the same to appear; and grapes produce the same effect, if when they are in their flowers you take a phial, filled with oil, and bind it to them, and shall let them remain so till they are ripe; and then the oil, being lighted in a lamp, you shall see a prodigious quantity of grapes; and the same may be done with other fruits. If the herb centaury be mixed with honey and the blood of a lapwing, and put in a lamp, they that stand about will appear of a gigantic stature; and if it be lighted in a clear evening, the stars will seem scattered about. The ink of the cuttle-fish, being put into a lamp, makes blackamores appear; also, a candle made of some saturnine things such as man's fat and marrow, with the brains of a crow or raven, which being extinguished in the mouth of a man lately dead, will afterwards when it shines alone, without other lights, bring great horror and fear upon the spectators about it, though they may be ignorant of its composition. Of such like torches, candles, lamps, &c. Hermes speaks largely of; also Plato, and Chyrannides; and of the later writers, Albertus Magnus makes particular mention of the truth and efficacy of these, in a treatise on lamps, lights, &c. of which we shall speak further.

To cause a person to believe that you can make appear to another, shut up in a room by himself, any thing that the former chooses.

This amusement must be performed in concert with some person, in the company, to whom you have communicated the secret. Agree privately with the person who is to be shut up in the room, that when he hears you give one knock, it denotes the letter A; that two will denote the letter B, and so on according to the order of the 24 letters of the alphabet. Then say, that you will cause to appear to the person who will consent to shut himself up in the next room, whatever animal any other in the company chooses; and in order that no other person, except he who is in the secret, may offer to shut himself up, tell the company that it

will require great courage. The person with whom you are in concert must then offer himself, and you must seem to accept of him with reluctance. Then kindle a lamp that emits an obscure light, and having given it to the person, desire him to place it in the middle of the room, and not to be frightened at what he sees. When the person is shut up, take a square piece of black paper, with a bit of white chalk, and desire any one of the company to write on it the name of the animal which he wishes to appear to the person in the adjoining room. We shall suppose that he writes the word *cock*. When you have read what he has written, burn the paper, by applying it to the flame of a lamp; and putting the ashes into a mortar, throw over them some powder, which you must pretend to be possessed of great virtue. Then take a pestle, as if intending to triturate the mixture, and give three knocks with it to denote to the person shut up in the next room the letter C; after which you must move the pestle round in the mortar two or three times, that the person may have leisure to pay proper attention. Then give fourteen knocks to denote the letter O; and continue in this manner giving the proper knocks for the other two letters. If you then ask the person what he sees, he will at first return no answer, in order to make it be believed that he is frightened; but he will at length say he thought he saw a cock. That there may be no mistake in regard to the letters, each of the parties in the secret, before the knocks for the different letters are given, may repeat privately the letters of the alphabet according to their order, so as to be certain of the number of knocks proper for each.

Method of speedily delineating all sorts of plants and flowers.

Provide two balls, and some printer's ink; then, holding one of the balls in the left hand, place upon it the leaf or plant, the impression of which you are desirous of obtaining, and taking the other ball, which must be daubed over with ink, in the right hand, strike it gently once or twice against the plant, without deranging it: Then carefully remove the leaf or plant, and putting it between a sheet of paper folded double, lay it on a table covered with a woollen cloth, and press it two or three times with a wooden roller, covered with a handkerchief, or any thing else of the like kind. After this process, you will find on each leaf of the paper, an impression of the upper and lower side of the leaf; which, besides being a perfect resemblance of nature, will even sur-

pass the more beautiful engravings, especially if the operation has been performed with dexterity.

The Magic Picture.

Provide a glass similar to those used for miniature paintings, that is to say, somewhat concave, and another piece of common glass of the same size, and exceedingly thin. Fill the concave side of the former with a mixture of hogslard and wax melted together; then apply the two pieces of glass to each other exactly, that the above composition may be inclosed between them; and having wiped the edges very clean, cement upon them, with fish glue, a small slip of swine's bladder. When it is thoroughly dry, clean the glasses and apply to the flat side a portrait, or any other subject at pleasure, and inclose the whole in a frame, so as to conceal the edges.

If this portrait be exposed to heat, the composition between the two glasses will dissolve, and become transparent, and the portrait will be distinctly seen; but it will disappear when the substance cools; in this manner it may be made to re-appear as often as you choose.

The Changeable Picture.

Paint upon thin paper, in a slight manner, and with very light colours, any subject at pleasure, but disposed in such a manner that by painting the paper stronger on the other side, it may be entirely disguised: then cover the last side with a piece of white paper to conceal the second subject, and inclose the whole in a frame, and even between two pieces of glass. If you hold this picture between you and the light, and look through it, a subject will be seen very different from that it exhibits when looked at in the usual manner.

White Ink, for writing on Black Paper.

Take egg-shells, and having carefully washed them, remove the internal pellicle, and grind them on a piece of porphyry. Then put the powder into a small vessel filled with pure water, and when it has settled at the bottom, decant the water, and dry the powder in the sun. This powder must be preserved in a bottle. When you are desirous of using it, put a small quantity of very pure gum ammoniac into distilled vinegar, and leave it to dissolve during the night; next morning the solution will appear exceedingly

white, and if you then strain it through a piece of linen cloth, and add to it the powder of egg-shells, in sufficient quantity, you will obtain a very white ink.

Of Sympathetic Inks, and some tricks which may be performed by means of them.

Sympathetic inks are certain liquors, which alone, and in their natural state, are colourless; but which, by being mixed with each other, or by some particular circumstance, assume a certain colour. Chemistry presents us with a great many liquors of this kind, the most curious of which we shall describe. 1st. If you write with a solution of green vitriol, to which a little acid has been added, the writing will be perfectly colourless and invisible. To render it visible, nothing will be necessary but to immerse the paper in an infusion of gall-nuts in water, or to draw a sponge moistened with the infusion over it. 2d. If you are desirous of having an ink that shall become blue, you must write with an acid solution of green vitriol, and moisten the writing with a liquor prepared in the following manner. Make four ounces of tartar, mixed with the same quantity of nitre, to detonate on charcoal; then put this alkali into a crucible with four ounces of dried ox blood, and cover the crucible with a lid, having in it only one small aperture; calcine the mixture over a moderate fire, till no more smoke issues from it; and then bring the whole to a moderate red heat; take the matter from the crucible, and immerse it, while still red, in two quarts of water, where it will dissolve by ebullition; and when the liquor has been reduced to one half, it will be ready for use. If you then moisten with it the writing above mentioned, it will immediately assume a beautiful colour. In this operation, instead of black ink, there is formed Prussian blue. 3d. If you dissolve bismuth in nitrous acid, and write with the solution, the letters will be invisible. To make them appear, you must employ the following liquor. Boil a strong solution of fixed alkali with sulphur reduced to a very fine powder, until it dissolves as much of it as it can; the result will be a liquor which exhales vapours of a very disagreeable odour, and to which, if the above writing be exposed, it will become black. 4th. Of all the different kinds of sympathetic ink, the most curious is that made with cobalt. It is a very singular phenomenon, that the characters or figures, traced out with this ink, may be made to disappear and re-appear at pleasure: this property is peculiar to ink made with cobalt; for all the other kinds are at

first invisible, until some substance has been applied to make them appear; when they have once appeared, they remain. To prepare this ink, take zaffer, and dissolve it in aqua regia (nitro muriatic acid), till the acid extracts from it every thing it can; that is to say, the metallic part, or the cobalt, which communicates to the zaffer its blue colour; then dilute the solution, which is very acrid, with common water. If you write with this liquor on paper, the characters will be invisible; but when exposed to a sufficient degree of heat they will become green. When the paper has cooled, they will disappear. It must, however, be observed, that if the paper be heated too much, they will not disappear at all.

Remark.

With this kind of ink, some very ingenious and amusing tricks, such as the following, may be performed.

To make a drawing, which shall alternately represent Winter and Summer.

Draw a landscape, and delineate the ground, and the trunks and branches of the trees, with the usual colours employed for that purpose, but the grass and leaves of the trees with the liquor above mentioned. By these means you will have a drawing, which, at the common temperature of the atmosphere, will represent a winter-piece; but if it be exposed to a proper degree of heat, not too strong, you will see the ground become covered with verdure, and the trees with leaves, so as to present a view in summer. Screens painted in this manner were formerly made at Paris. Those to whom they are presented, if unacquainted with the artifice, were astonished to find, when they made use of them that the views they exhibited were totally changed.

The Magic Oracle.

Write on several sheets of paper, with common ink, a certain number of questions, and below each question write the answer with the above kind of sympathetic ink. The same question must be written on several pieces of paper, but with different answers, that the artifice may be better concealed. Then provide a box, to which you may give the name of the Sybil's cave, or any other at pleasure, and containing in the lid a plate of iron made very hot, in order that the inside of it may be heated to a certain degree. Having

selected some of the questions, take the bits of paper containing them, and tell the company that you are going to send them to the Sybil, or Oracle, to obtain an answer; introduce them into the heated box, and when they have remained in it some minutes, take them out, and shew the answers which have been written. You must, however, soon lay aside the bits of paper; for if they remain long in the hands of those to whom the trick is exhibited, they would see the answers gradually disappear, as the paper becomes cold.

A secret to Draw without either Ink or Pencil.

Rub a sheet of paper with Tripoly; then with any blunt point, form your drawing on it. Whatever you trace will be visible.

To take off instantly a copy from a Print or a Picture.

Make a water of soap and alum, with which wet a cloth or paper; lay either on a print or picture, and pass it once under the rolling press; then going round to the other side to take it up, you will have a very fine copy of whatever you shall have laid it upon.

To make Diamonds.

Mix with a silver spoon, six parts of fine white calcined pebbles, reduced into an impalpable powder, with four of the whitest and best pulverised tartar, and seven of alkaline salt.—Put this in a crucible, made of the same earth as is used in glass manufactories, and put in their fire. The longer it remains there, the harder and finer the composition will be. It must be there seven months at least, before it can require a tolerable lustre.—*Note.* That the powders we have mentioned to make the above composition with, are all to be sifted through a very fine sieve, before they are used.

Non-metallic Vegetation.

Cause to decrepitate, on burning charcoal, eight ounces of saltpetre, and place it in a cellar, in order that it may produce oil of tartar per deliquium, then gradually pour over it, to complete saturation, good spirit of vitriol, and evaporate all the moisture. The result will be a white,

compact, and very acrid saline matter. Put this matter into an earthen dish, and having poured over it a gallon of water, leave it exposed to the open air. At the end of some days the water will evaporate, and there will be formed all around the vessel ramifications in the form of needles, variously interwoven with each other, and about 15 lines in length. When the water is entirely evaporated, if more be added, the vegetation will continue. It may be readily seen that this is nothing but the mere crystallization of a neutral salt, formed by the vitriolic acid and the alkali of the nitre employed, that is to say, vitriolated tartar.

The Magician's Mirrors.

In the wainscot of a room make two overtures, of a foot high, and ten inches wide, and about a foot distant from each other. Let them be at the common height of a man's head, and in each of them a transparent glass, surrounded with a frame, like a common mirror. Behind this partition place two mirrors, one on the outside of each overture, inclined to the wainscot, in an angle of forty-five degrees; let them be both eighteen inches square: let all the space between them be enclosed by boards of pasteboard, painted black, and well closed, that no light may enter: let there be also two curtains to cover them, which may be drawn aside at pleasure. When the person looks into one of these supposed mirrors, instead of seeing his own face he will perceive the object that is in front of the other; so that, if two present themselves at the same time before these mirrors, instead of each one seeing himself, they will reciprocally see each other. Note, There should be a sconce with a candle placed on each side of the two glasses in the wainscot, to enlighten the faces of the persons who look in them, otherwise this experiment will have no remarkable effect. This recreation may be considerably improved by placing the two glasses in the wainscot in adjoining rooms; and a number of persons being previously placed in one room, when a stranger enters the other, you may tell him his face is dirty, and desire him to look in the glass, which he will naturally do, and on seeing a strange face he will draw back; but returning to it, and seeing another, another, and another, like the phantom-kings in Macbeth, what his surprise will be is more easy to conceive than express. After this a real mirror may be let down on the back of the glass, and if he can be prevailed on to look in it once more, he

will then, to his farther astonishment, see his own face, and may be told, perhaps persuaded, that all he thought he saw before was but mere imagination. How many tricks, less artful than this, have passed in former times for sorcery; and at this time, in some countries, for apparitions! Note. When a man looks in a mirror that is placed perpendicular to another, his face will appear entirely deformed. If the mirror be a little inclined, so as to make an angle of eighty degrees (that is, one ninth part from the perpendicular) he will then see all the parts of his face except his nose and forehead. If it be inclined to sixty degrees (that is, one third part), he will appear with three noses and six eyes: in short, the deformity will vary at each degree of inclination; and when the glass comes to forty-five degrees (that is, half-way down), the face will vanish. If instead of placing the two mirrors in this situation, they are so disposed that their junction may be vertical, their different inclinations will produce other effects; as the situation of the objects relative to these mirrors is quite different. The effects of these mirrors, though remarkable enough, occasion but little surprise, as there is no method of concealing the cause by which they are produced.

Prince Rupari's Drop.

Take up a small quantity of the melted matter of glass with a tube, and let a drop fall into a pail of water, by which it will retain its form, and appear solid throughout; except that it contains a few air-bubbles. This drop will have a small tail, which being broke, the whole substance of the globe will burst, with great violence, into a fine powder, and give a little pain, but do no hurt to the hand that breaks it. It is remarkable that the bulb or body will bear the stroke of a hammer without breaking: but, if the tail be broken, the above-mentioned effect is produced. If the drop be cooled in the air, it will not produce the effect; and if it be ground away on a stone nothing extraordinary appears; but, if it be put into the receiver of an air-pump, and there broken, the effect will be so violent as to produce light. This phenomenon is supposed to proceed from the particles of the glass being in a state of repulsion, while melted; but, by being dropped into cold water, the external particles are condensed, and hold the internal (which are still in a state of repulsion), as in a case; but when an

opening is made in that case, by breaking off the tail, the confined particles rush forth, and burst the drop with the greatest violence.

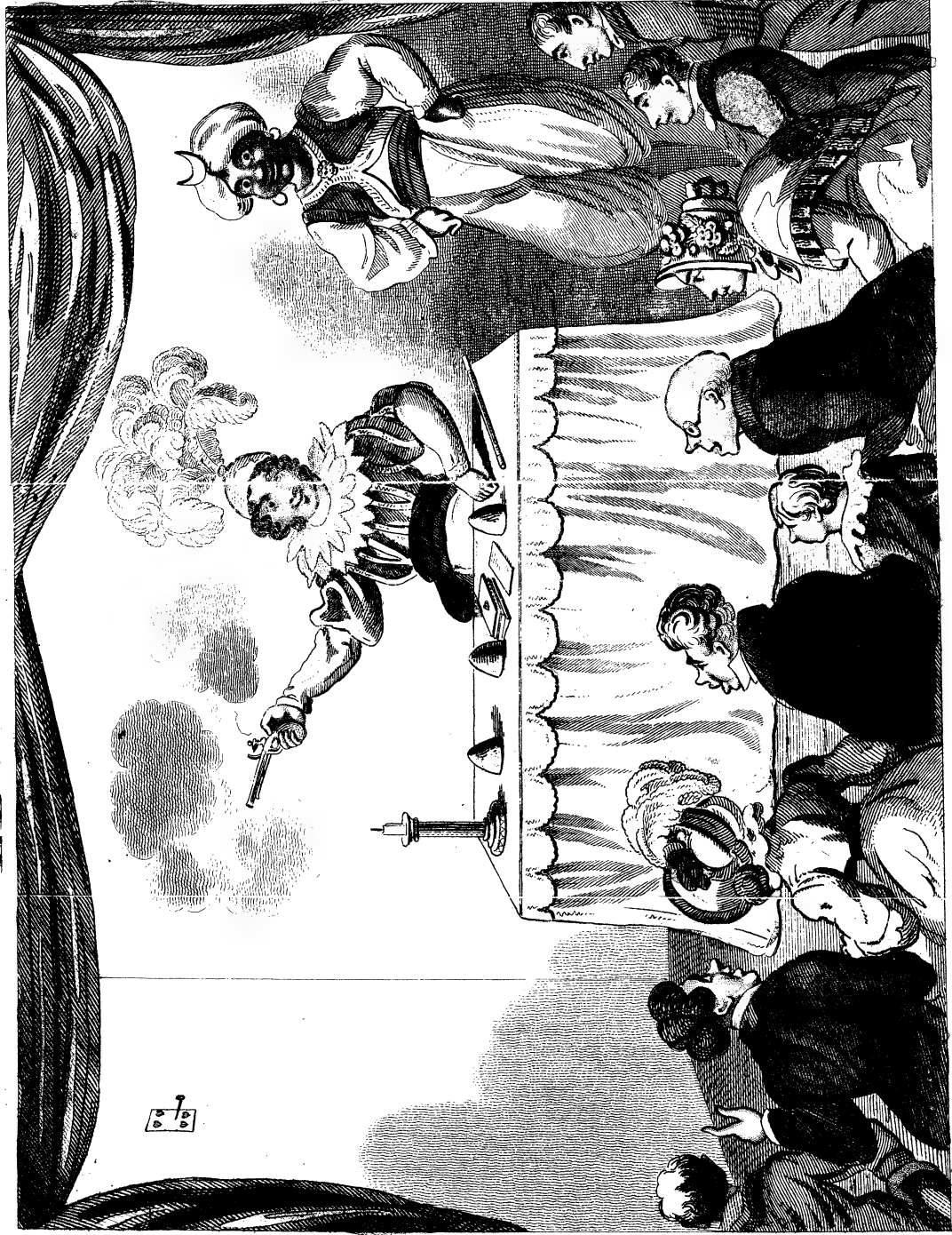
The revived Rose.

Take a rose that is quite faded, and, throwing some common sulphur on a chafing-dish of coals, hold the rose over the fumes, and it will become white. Then dip it into a bason of water, and giving it to any one, tell him to put it in his box or drawer, and after locking it to give you the key. When you return him the key, five or six hours after, and he unlocks his drawer, instead of the white rose he put in, he will find one that is perfectly red.

A Clock to go perpetually by the influence of the celestial bodies.

The construction of the movements of this clock is the same with those in common use: it differs from those only in its situation, and the manner in which it is wound up. This clock is to be placed near the wall, by or against which the tide constantly flows. To each of the barrels, round which the string that carries the weight is wound, there must hang a bucket, and into that, when the tide rises to a certain height, the water runs, by means of a pipe fixed in the wall. The bucket then overbalances the weight, descends and winds up the clock; but when it comes to a certain depth, it is taken by a catch fixed in the wall, which by turning it over, discharges the water. The weights of the clock then descend in the usual manner, and the buckets are drawn up. Now as this clock is kept in motion by the tide, and as the tide proceeds from the influence of the sun and moon, it necessarily follows, that the motion of the clock proceeds from the same cause; and that as long as the parts of the machine remain, motion will be perpetual. This, according to the common acceptation of the term, is certainly a perpetual motion; and so is every mill that is driven by a stream: but that is not the sense in which the term was used by the advocates for a perpetual motion in the last century. They meant a machine, which, being once put in motion, should, by its peculiar construction, move perpetually, without any fresh force impressed. This they attempted by various means; as the attraction of a loadstone, the descent of heavy bodies, the difference of the momentum in revolving weights, &c. all of which though ingenious enough, discover a want of due attention to the principles of mechanics.

LEGER DEMAIN.



OF CARDS AND DICE.

The Card nailed to the Wall by a Pistol Shot.

A card is desired to be drawn, and the person who chooses it is requested to tear off a corner, and to keep it, that he may know the card—the card so torn is then burnt to cinders, and a pistol is charged with gunpowder, with which the ashes of the card are mixed. Instead of a ball a nail is put into the barrel, which is marked by some of the company. The pack is then marked by some of the company. The pack of cards is then thrown up in the air, the pistol is fired, and the card appears nailed against the wall—the bit of the corner which was torn off is then compared with it, and is found exactly to fit, and the nail which fastens it to the wall is recognized by the person who marked it.

EXPLANATION.

When the performer sees that a corner has been torn from the chosen card, he retires, and makes a similar tear on a like card. Returning on the theatre, he asks for the chosen card, and passes it to the bottom of the pack, and substitutes expertly in the place, the card which he has prepared, which he burns instead of the first. When the pistol is loaded, he takes it in his hand under the pretence of shewing how to direct it, &c. He avails himself of this opportunity to open a hole in the barrel, near the touch-hole, through which the nail falls by its own weight into his hand; having shut this passage, he requests one of the company to put more powder and wadding into the pistol; whilst that is doing, he carries the nail and card to his confederate, who quickly nails the card to a piece of square wood which stops, hermetically, a space left open in the partition, and in the tapestry, similar to the rest of the room, and by which means, when the nailed card is put in, it is not perceived; the piece of tapestry which covers it, is nicely fastened on the one end with two pins, and to the other a thread is fastened, one end of which the confederate holds in his hand. As soon as the report of the pistol is heard, the confederate draws his thread, by which means the piece of tapestry falls behind a glass—the card appears the same that was marked—and with the nail that was put in the pistol. It is not astonishing, that this trick, being so difficult by its complexion to be guessed at, should have received such univer-

sal applause—N. B. After the pistol has been charged with powder, a tin tube may be slipped upon the charge, into which the nail being rammed along with the wadding, by inclining it a little in presenting to one of the spectators to fire, the tube and contents will fall into the performer's hand to convey to his confederate. If any one suspects that the nail has been stolen out of the pistol you persist on the contrary, and beg the company at the next exhibition to be further convinced; you then are to shew a pistol; which you take to pieces, to shew that all is fair without any preparation—you charge it with a nail, which is marked by some person in confederacy with you, or you shew it to many people on purpose to avoid its being marked. In this case the card is nailed with another nail, but to persuade the company that it is the same, you boldly assert, that the nail was marked by several persons, and you request the spectators to view it, and be convinced.

To find the Points cast on two Dice.

For this trick, cast both the dice, and then mark how many points appear at the top; then let him take up one of them, (no matter which) and see what number is at the bottom, and add all together; then let him cast the dice again, and add the points cast to the former sum: let the dice stand, bring seven with you, and then add the points which appear at the top of the dice, and you will find so many were cast in the whole

The Card burnt, and afterwards found in a Watch.

One of the company draws a chance card, and you ask for three watches from the spectators, which you fold up in separate pieces of paper in the form of dice boxes, which are laid on the table, and covered with a napkin—the card chosen is burnt, and the cinders put into a box—shortly after the box is opened, the ashes are not there. The three watches are put on a plate, and some one of the company chooses one, the same person opens the watch, and finds under the glass a piece of the burnt card: and in the watch-case, under the watch, is found a miniature card, resembling the one burnt.

EXPLANATION.

The card chosen is known by the arrangement we have explained. The watches are placed, well covered with

paper, on a little trap: the trap is described in the cutting, tearing and mending a handkerchief. When you have made known to the confederate the card which is chosen, he stretches his arm to the table to take one of the watches, and deposit there what is requisite; the watches must be covered with a napkin, which is supported by bottles, or somewhat else, otherwise the hand of the confederate would be seen, or the napkin would be seen to move. As for the means employed to cause the ashes of the burnt card to disappear in the box, it consists in putting into the cover a piece of wood or paper which exactly fits it, and falls down to the bottom when the box is shut; this piece of wood or paper being of the same colour as the inside of the box, operates as a double bottom, and hides the ashes from the view of the deceived spectator, who at that minute is tempted to believe that the ashes are gone out to be combined afresh, and to produce the miniature card which is found in the watch.

To find the Number of Points cast on three Dice.

To perform this, let any person cast three dice; then bid him add together the points which are uppermost; then set one of the dice aside, and to the former add the points at the bottom of the other two dice; then bid him throw these two dice, and mark how many points appear at the top, which add to the former sum, then let him set one of those dice aside, and mark the points which are under the other dice, and add to it the former sum; lastly, let him throw that other dice and whatever appears on the top of it, add to the former sum, and let the dice remain.—This done, come to the table, and note what points appear upon the three dice, which add privately together, and add to it twenty-one, and you will find the sum to be equal to the sum which the parties privately had made for all the other operations.

To call for any Card in the Pack.

This trick, which requires very little practice to perform, is done in the following manner. Having privately seen a card, put it at the bottom of the pack, then shuffle the cards till it comes to the bottom again, then put the cards behind you; and say here I call for, naming the bottom card which you have seen; and as you hold them behind you, turn the top card with its face upwards, then hold forth the cards, and as you hold them you may see what the next card is; then put the cards behind you again, and take the top card,

and put at the bottom, with its face downwards, and turn the next card with its face upwards. and whilst you are doing this, say, here I call for, nameing the card you saw last; then hold forth the cards again, shewing the bottom card, which will be that you call for; then put the cards behind you again and proceed in the same manner as you did before; you may by this method go through them all, and call for all the cards in the pack, to the admiration of the beholders, who will be surprised how you could find them out when you hold them behind you.

To shuffle Cards in such a Manner as always to keep one certain Card at the Bottom.

A person with a hard hand and stiff joints should never think of playing deception with the cards, as clumsy fingers will not do. In shewing tricks with cards, the principle point consists in shuffling them nimbly, and yet keeping one certain card, either at the bottom or in some known place of the pack, four or five cards from the bottom; for by this you may seem to work wonders; since it is easy for you to see, or take notice of a card; which, though you are perceived to do, it will not be suspected if you shuffle them well together afterwards, by the method here to be taught, which is this: in shuffling, let the bottom card be always kept a little before, or, which is best, a little behind all the rest of the cards; put it a little beyond the rest before, right over your fore finger, or else, which is the best, a little behind the rest, so as the little finger of the left hand may slip up, and meet with it at first; shuffle as thick as you can, and at last throw upon the board the bottom card, with as many more as you would preserve for any purpose, a little before or a little behind the rest; and be sure to let your fore-finger, (if the pack be laid before) or your little finger, (if the pack be laid behind) always creep up to meet with the bottom card, and when you feel it, you may there hold it till you have shuffled over again, which being done, the card which was first at the bottom will come there again; thus you may shuffle them before their faces, and yet leave your noted card at the bottom; you must try to be perfect in this mode of shuffling; and having once obtained it, you may do almost what you please; for whatever pack you make, though it is ten, twelve, or twenty cards, you may still keep it next the bottom, and yet shuffle them often to please the curious.

*To put a lighted candle under water, without extinguishing it ;
or a handkerchief without wetting it.*

You shew a lighted candle in a glass or a handkerchief rolled tight together to the company, and putting it down, the candle is seen burning under the water, or the handkerchief upon examination is found not wet.

EXPLANATION.

Take a glass, and fastening a small bit of wood across the mouth, stick thereon a piece of candle lighted; and with a steady hand, convey the glass to the surface of the water; then push it carefully down, and you may see the candle burn under the water, and you may bring it up again alight.

In the same manner you may put a handkerchief rolled tight together, and it will not be wet.

The principal art in performing this trick, consists in the nicety of bringing the mouth of the glass exactly level with the surface of the water; for if you put it the least on one side, the water will rush in, and consequently put out the candle, or, in the other case, wet the handkerchief; so that a nice eye and steady hand are necessarily requisite for this performance.

This trick, simple as it is, may serve in some degree to elucidate that contrivance called the *diving-bell*; as it is certainly done upon the same principle.

To wash your hands with melted lead.

You order some lead to be melted, and suffer it to be poured over your hands, or you put your hands into it, and wash them.

EXPLANATION.

Take one ounce of quicksilver, two ounces of good bol-armoniac, half an ounce of camphor, and two ounces of aqua-vitæ; mingle them together, and put them into a bra-

zen mortar and beat them with a pestle ; having so done anoint your hands all over with this ointment, and you may put your finger into melted lead, or you may wash your hands therein.—If you pour the lead upon them it will neither burn nor scald you.

To make a report like a gun with a tobacco pipe.

You call for a pipe of tobacco, and when you apply the flame of a candle to it, it sends forth the report of a musket without breaking the pipe.

EXPLANATION.

Take saltpetre one ounce, cream of tartar one ounce, sulphur half an ounce, beat them to powder singly ; then mix them together, and keep the powder in a paper in your pocket. When you intend to perform this trick, convey a grain into a pipe of tobacco, and when it takes fire, it will produce the noise of a gun, but not break the pipe.

You may also put as much as will lie on your nail upon little bits of paper in any place, and when you set fire to them, there will be the report of so many great guns, without any bad consequences.

To cause a stone to be in perpetual motion.

This requires some hours preparation, as may be seen by the explanation. When the necessary pains have been taken, the stone appears in a bottle continually moving about.

EXPLANATION.

Put very small filings of iron into aqua-fortis, and let them remain there until the water has taken off the iron requisite, which will happen in seven or eight hours. Then take the water, and put it into a phial an inch wide, with a

large mouth, and put in a stone of lapis calaminare, and stop it up close ; the stone will then keep in perpetual motion.

The Turks and Christians.

You tell the company the following story : An English captain, whose crew consisted of thirty men, half Christians, and half Turks, was wrecked, and for the preservation of some of their lives it was deemed expedient that half the crew should be thrown overboard, or all must inevitably perish. The captain therefore proposed that every man should come upon deck, and that every ninth person should become the victim. The crew obeyed the summons, and the captain placed them in such an order, though with apparent impartiality, that every ninth man was a Turk, and all the Christians were preserved. You then take 15 red cards for the Christians, and 15 black cards for the Turks, and you place them in such an order on the table, that every ninth card is black, which you take away as you reckon, till only the 15 red cards remain.

EXPLANATION.

This ingenious trick, which is scarcely known, can be performed by the fourteen vowels in the following couplet :

“ From numbers, aid, and art,
“ Never will fame depart.”*

You must begin with the Christians (red cards) O being the 4th vowel in *From*, put down four red cards ; U five black ones ; E two red ; A one black ; I three red ; A one black ; A one red ; E two black ; E two red ; A one black.

You may make three or four lines of the cards, which will make it appear more strange. Be sure to take away every ninth card, saying “ Overboard with that Turk,” and all the red cards will remain.

A Trick with Cards, uniting the double Advantage of being very easy and infallible, it being on a little numerical Combination.

Desire some person in the company to choose, at his will, three cards out of a piquet pack, observing to him, that the ace is to be counted for 11 points, the court cards 10, and the other cards according to the points they mark.—When he has made his choice, desire him to lay on the table his three cards separately, and to put upon each parcel as many cards as are wanting to make up 15 points: that is to say, if the first card should be nine, there must be added six cards over; if the second a ten, five cards; and if the third a knave, five cards likewise; this will make nineteen cards employed; consequently there will remain thirteen, which you are to ask for; and pretending to examine them, you must count them, in order to be certain of the number that is left; then in your mind add sixteen to the remaining number, and you will have twenty-nine, number of the points that the three chosen cards under the parcels contain.

FINIS.